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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/750,932

12/30/2003

Kwang Deok Seo

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35884

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01/31/2008

LEE, HONG, DEGERMAN, KANG & SCHMADEKA

660 S. FIGUEROA STREET

Suite 2300

LOS ANGELES, CA 90017

EXAMINER

SENGI, BEHROOZ M

ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

01/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/750,932	SEO, KWANG DEOK	
	Examiner	Art Unit	
	Behrooz Senfi	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-16 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 8 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/19/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The Oath/Declaration is indicated Application No. 2003-35724, filed 06/03/2003 as prior foreign application and signed by one inventor only. Therefore the priority date considered by the examiner is 06/03/2003.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 7, 9 – 16 and 18 - 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. (US 2005/0036552).

Regarding claim 1, Takahashi discloses, a motion vector and macro-block type determining method (i.e., figs. 22 and 37) comprising; receiving a high frame-rate video stream having N frames (i.e., fig. 22, receiving high frame rate MPEG 2 video stream), skipping a frame N-1 (i.e., abstract, lines 11 – 13, fig. 35, skip frame n-1, page 8, paragraph 0071 and page 11, paragraph 0096), allocating a motion vector to a macro-block of frame N according to a macro-block type of the skipped frame N-1 (i.e., fig. 35, MV n-1, page 7, paragraph 0064, page 8, paragraph 0071 and page 10, paragraph 0082), allocating a macro-block type to a macro-block type of frame N according to a

macro-block type of the skipped frame N-1 (i.e., fig. 8, inter/intra) and outputting a low frame-rate video stream (i.e., fig. 22, outputting a low frame-rate video stream, MPEG-4).

Regarding claim 2, Takahashi discloses, the method of claim 1, wherein the macro-block type of the frame N is divided into an inter type and a skipped type (i.e., page 3, paragraph 0027).

Regarding claim 3, Takahashi discloses, the method of claim 2, wherein the motion vector of the macro-block of the frame N is determined according to a macro-block type of the skipped frame N-1 when the macro-block of the frame N is an inter type (i.e., fig. 8, page 8, paragraph 0072).

Regarding claim 4, Takahashi discloses, the method of claim 2, wherein the macro-block type of the frame N is determined according to a macro-block type of the frame N-1 located at approximately similar position with the macro-block of the frame N when the macro-block of the frame N is a skipped type (i.e., figs. 28 – 29 and 35, page 14, paragraph 0145).

Regarding claim 5, Takahashi discloses, the method of claim 4, further comprising: determining a new motion vector of the macro-block of the frame N when the new macro-block is an inter type (i.e., page 8, paragraph 0072).

Regarding claim 6, Takahashi discloses, the method of claim 5, wherein the new motion vector of the macro-block of the frame N is determined so as to be same with a motion vector of the macro-block of the frame N-1 located at approximately a similar position with the macro-block of the frame N (i.e., fig. 35, MV_{n-1}).

Regarding claim 7, Takahashi discloses, a motion vector and macro-block type determining method (i.e., figs. 22 and 37) comprising; determining whether a macro-block of a frame N transmitted after a skipped frame N-1 is an inter type or a skipped type (i.e., figs. 25 – 26, page 3, paragraph 0027), allocating a new motion vector for the frame N according to a macro-block type of the skipped frame N-1 when a macro-block of the frame N is an intra type (i.e., figs. 25 – 26 and 35, page 3, paragraph 0027, and page 6, paragraph 0054) and determining a new macro-block type for the frame N according to a macro-block type of the frame N-1 located at approximately a similar position with the macro-block of the frame N when the macro-block of the frame N is a skipped type (i.e., figs. 28 – 29 and 35, page 14, paragraph 0145).

Regarding claim 9, the limitations claimed are substantially similar to claims 1 and 7, thus have been analyzed and rejected in claims 1 and 7 above.

Regarding claims 10 - 11, the limitations claimed are substantially similar to claims 3 - 4, therefore the grounds for rejecting claims 3 - 4 also applies here.

Regarding claim 12, the limitations claimed are substantially similar to claim 7, therefore the grounds for rejecting claim 7 also applies here.

Regarding claim 13, the limitations claimed are substantially similar to claim 2, therefore the grounds for rejecting claim 2 also applies here.

Regarding claim 14, Takahashi discloses, the method of claim 12, wherein the new motion vector is determined based on an equation $MV'N = MVN + MVN.1$, wherein $MV'N$ is a motion vector allocated to a macro-block of the frame N, MVN is a motion

vector of a macro-block of the frame N, and $MVN.1$ is a motion vector of a macro-block of the frame N-1 (please see, fig. 28, last equation).

Regarding claim 15, Takahashi discloses, wherein $MVn-1$ has an approximately infinite value when the macro-block of the frame N-1 is an intra type (i.e., fig. 26, page 8, paragraph 0071).

Regarding claim 16, Takahashi discloses, the method of claim 14, wherein $MVn-1$ has an approximately 0 value when the macro-block of the frame N-1 is a skipped type (i.e., fig. 8, skip type macro-block having zero value).

Regarding claims 18 - 22, the limitations claimed are substantially similar to claims 7 and 9, therefore the grounds for rejecting claims 7 and 9 also applies here.

Allowable Subject Matter

4. Claims 8 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Behrooz Senfi whose telephone number is 571-272-7339. The examiner can normally be reached on M-F 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/750,932
Art Unit: 2621

Page 6

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Behrooz Senfi
Examiner
Art Unit 2621

